

**OLYMPUS**<sup>®</sup>

Your Vision, Our Future

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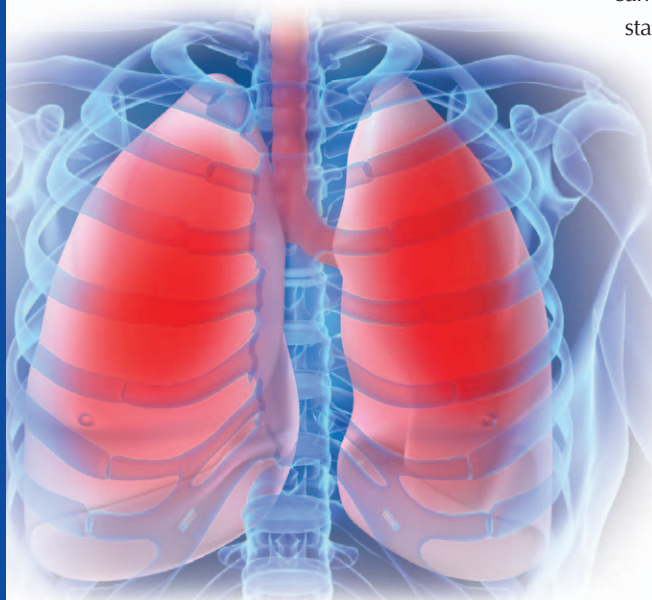
# Envision

Medical and surgical news for the healthcare community nationwide

## Lung cancer: Sixth leading cause of cancer-related death in U.S. among non-smokers

While smokers and former smokers are at far greater risk, lung cancer in people who have never smoked is the sixth leading cause of cancer-related deaths in the United States.<sup>1</sup> In fact all told, lung cancer is the leading cause of all cancer-related deaths among both men and

women, taking more lives each year than breast, prostate and colon cancers combined.<sup>2</sup> An estimated 215,000 new cases of lung cancer will be diagnosed in 2008, and 161,840 people will die of the disease, accounting for 29% of all cancer deaths.<sup>2</sup> Unfortunately, only 16% of lung cancer is diagnosed at its earliest and most curable stage, and more than 51% of cases are diagnosed after the cancer has metastasized.<sup>3</sup>



To increase awareness about this deadliest of cancers, November has been established as Lung Cancer Awareness Month. In the spirit of awareness, this issue of *Envision* explores three new technologies that are having an impact on diagnosing and staging lung cancer and other pulmonary diseases. See stories inside for information on endobronchial ultrasound (EBUS), enhanced EBUS with the Olympus Guide Sheath (EBUS-GS) and video-assisted thoracoscopic surgery (VATS). ●

<sup>1</sup> Lung Cancer Alliance, *LCA Issues Statement on Lung Cancer in Non-Smokers*, [www.lungcanceralliance.org](http://www.lungcanceralliance.org) (accessed 10-2-08)

<sup>2</sup> American Cancer Society, *What are the Key Statistics About Lung Cancer?*, [www.cancer.org](http://www.cancer.org) (accessed 10-2-08)

<sup>3</sup> Lung Cancer Alliance, *2007 Facts About Lung Cancer*, [www.lungcanceralliance.org](http://www.lungcanceralliance.org) (accessed 10-2-08)

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# EBUS: Less invasive, more effective way to diagnose and stage lung cancer

One of the most effective methods for diagnosing lung cancer is endobronchial ultrasound (EBUS), which offers a non-surgical alternative to traditional mediastinoscopy. "EBUS has revolutionized how we approach the patient with lung cancer and other thoracic tumors and lymph node pathologies. It allows us to diagnose and stage pulmonary disease simultaneously via a minimally invasive outpatient procedure under conscious sedation in the bronchoscopy suite. EBUS offers a very low side effect profile and an alternative to riskier surgery," says Gerard A. Silvestri, MD, MS, professor of medicine, Medical University of South Carolina, Charleston, SC.

As the leader in EBUS, Olympus recently introduced the next-generation endobronchial ultrasound transbronchial needle aspiration (EBUS-TBNA) system, featuring Aloka ProSound Alpha 5 ultrasound compatibility and a larger channel diameter (2.2 mm). With its detachable cable, the BF-UC180F can capitalize on the advanced imaging

capabilities of Aloka and next generation Olympus ultrasound processors. And the scope's larger working channel offers an improved suction capability and allows for use of additional and larger sampling devices.

Olympus EBUS-TBNA scopes feature linear-scanning ultrasound imaging technology and a dedicated aspiration needle, specifically designed for diagnostic biopsies and staging of lung cancer. The

EBUS-TBNA system offers real-time imaging and allows the physician to confirm the exact position of the needle in the lymph node, resulting in improved safety, efficiency and accuracy over conventional, "blind" TBNA. Additionally, the scope enables the physician to place a needle into a variety of lymph nodes and often facilitates lung

cancer staging within one procedure, offering an alternative to mediastinoscopy—a more complex and costly surgical procedure.

For more information, contact your Olympus sales representative. ●



The latest advance in EBUS is the introduction of the proprietary Olympus Guide Sheath Kit, which acts as an extended working channel to permit the physician to sample a lesion beyond the reach of the bronchoscope.

## Olympus Guide Sheath Kit: Enhanced EBUS for diagnosis of peripheral pulmonary lesions

Guide Sheath-enhanced EBUS enables physicians to target peripheral lesions more easily and allows multiple approaches to the same site, increasing reliability of collecting tissue and cell samples from targeted areas and improving the diagnostic rate for small lesions.

**How it works:** Stoppers are placed on Olympus EndoTherapy sampling devices and an ultrasound probe. Then the bronchoscope is inserted into the bronchus and the single-use Guide Sheath is inserted into the bronchoscope. If needed, a guiding device similar to a curette can be used to steer the

sheath to the targeted lesion. A radiopaque tip at the distal end of the sheath allows the physician to confirm its position under fluoroscopy. Once the sheath is positioned, an ultrasonic probe is then inserted to accurately locate and identify the lesion. Another stopper is used at the biopsy port to fix the sheath's position and permit repeated sampling. The ultrasound probe is withdrawn and a forceps or cytology brush is inserted to sample tissue or cells at the site. Multiple approaches can be made to the same location, and the user can easily switch between devices.

*Continued on page 6*



# Eddie On... Picturing your repairs

We are pleased so many customers have taken advantage of our 24/7 web-based service portal since its launch two years ago. Customers can sign in as a guest or open a free account for automated access to many online conveniences, including initiating repair orders, approving estimates, checking repair status, confirming delivery schedules, viewing detailed repair histories and checking on consumption of service agreement dollars, to name a few.

We have recently added another enhancement to the portal that should prove to be a great benefit to our customers—pictorial repair estimates.

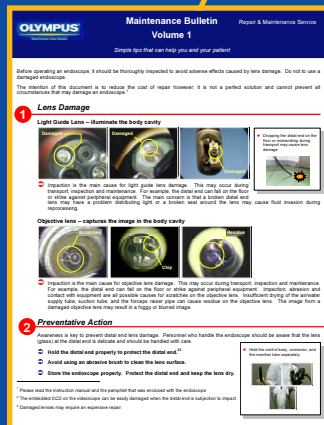
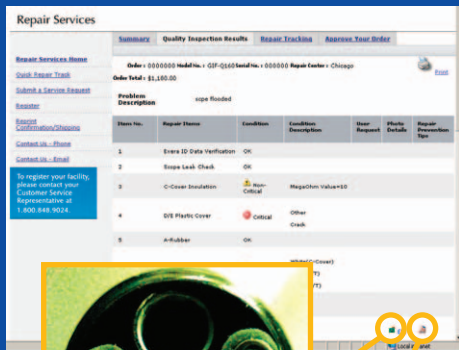
Customers accessing their estimates online through the portal will start noticing small icons on their electronic repair estimates. By clicking on a photo icon, customers can view a picture of the “as-received” condition of the part of the product in need of repair. When applicable, customers may also click on icons next to the picture of their equipment to learn more about how to prevent or reduce the occurrence of the type of damage shown in the photograph.

These visual enhancements are meant to simplify the repair experience, making estimates easier to understand, and to help customers evaluate their repair options. Rest assured, however, that online access to repair estimates is optional and offered as an added convenience. As in the past, our service consultants will continue contacting customers by phone to discuss service and repair options.

If you are not already using the portal and would like to get started, please call 800-848-9024 to register your facility and receive your account number and pin. Or you can visit [www.olympusamerica.com/serviceportal](http://www.olympusamerica.com/serviceportal) and login with your service order or airbill number for quick access to your estimate.

*Eddie*

**Eddie Garcés**  
Vice President,  
Olympus Medical Production Repair Group,  
Chief Quality Improvement Officer  
[www.olympusamerica.com/repairservices](http://www.olympusamerica.com/repairservices)



## EndoWorks® customers can measure efficiency easily and accurately

EndoWorks®  
versions 7.3 and  
7.4 include  
capabilities to help  
you easily measure



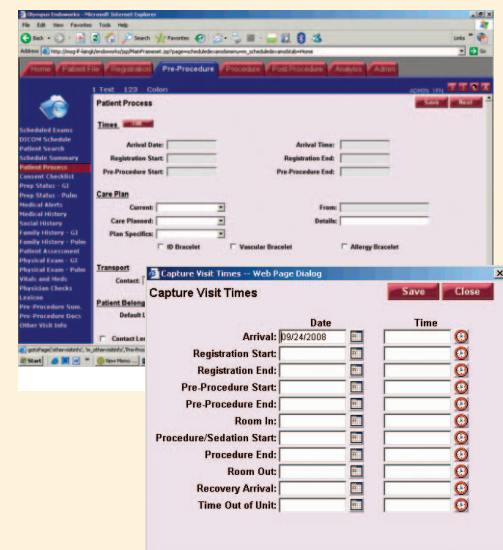
lab efficiency. In the patient process sections of the “Pre-Procedure” and “Procedure” tabs, you can automate time collection data, including:

- Patient arrival
- Registration start and end
- Admission/pre-procedure start and end
- Time into procedure room
- Sedation start and procedure end
- Room turnover time
- Out of procedure room/arrival in recovery/discharge time

By automating your time tracking, you can quickly generate customized reports to analyze efficiency, bottlenecks and improvements over time. By selecting the “Analysis” tab, you can view and track reports such as:

- Length of the procedure
- Amount of time in the procedure room
- Length of time for each step in the patient visit and the total patient cycle time
- Time intervals between each process to identify “waste of waiting” inefficiencies

For more information about EndoWorks, see page 6 to request literature, or visit [www.endoworks.com](http://www.endoworks.com).



# Lean methodology: An effective approach to improve lab efficiency

As costs continue to increase within the healthcare industry, GI units are exploring ways to improve efficiencies without compromising patient care. Borrowing from the manufacturing industry, healthcare systems have been successfully applying the practice of “lean” methods to eliminate waste and redundancy in their workplace processes.

There are eight types of waste, including:

- (1) **Overproduction**—producing more or faster than needed, such as asking patients the same questions multiple times, having huge stocks of supplies and overstaffing
- (2) **Waiting**—idle time created waiting for machines, people or information with signs of this waste evident in large waiting rooms, unnecessary testing and unbalanced workloads
- (3) **Unnecessary transport**—moving something farther than necessary, such as carrying lab specimens to different destinations and having multiple storage locations
- (4) **Overprocessing**—efforts which add no value from a customer’s perspective, such as multiple signatures, sorting and inspection, and production of reports that no one uses



- (5) **Excess inventory**—too much of anything, from surplus forms and supplies to a glut of medication, materials and equipment, which cost money, take up space and can become obsolete
- (6) **Unnecessary movement**—extra steps, such as not having needed items close at hand, which add time and increase the potential for errors

(7) **Defects**—substandard work, such as medication errors, equipment malfunctions and inaccurate test results, all causing loss in productivity

(8) **Unused creativity**—failing to engage or listen to employees, resulting in a loss of time, ideas or skills and setting the stage for low morale and staff resistance

By looking at every aspect of your operation, the data collected serves as benchmarks to create the foundation on which to improve efficiency as well as the means to measure improvement and establish best practices. Using established benchmarks for time tracking, the lean approach is a method that can positively impact operational efficiency, patient and physician satisfaction, and financial outcomes. The principles and practices of lean methodology in the healthcare setting is further explored in the Olympus University course, “Benchmarking, Budgeting and Best Practices” (4.0 contact hours). For more information, visit [www.olympusuniversity.com](http://www.olympusuniversity.com).



## MeritCare gets lean, increasing GI lab efficiency by 30%

As the largest provider of GI services in the Fargo-Moorhead region



of North Dakota, MeritCare’s Endoscopy Lab performs more than 9,000 procedures per year. As part of a recent renovation, the Lab upgraded its unit with new Olympus equipment and improved its operational efficiency using lean methodology principles. Orchestrating the effort was the hospital’s clinical coordinator, Lori Denis, RN, working in conjunction with Olympus EndoSite® Consulting. “They scrutinized every aspect of our operation from start to finish, looking at our throughput, scheduling, staffing mix,

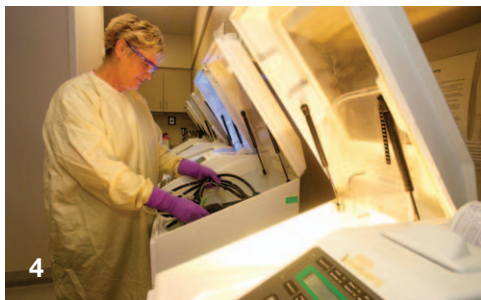
workflow, layout and space utilization, reprocessing setup and infection control processes as well as our inventory system,” says Denis. Highlights of the Lab’s accomplishments to date include:

- **Enhanced patient throughput** with better space utilization, scheduling and workflow management for a 30% boost in daily patient volume and an 87% reduction in the patient wait list
- **More efficient scheduling** by assigning waiting patients to the first available physician for a 23% increase in the number of procedures per hour
- **Streamlined workflow**, including having one nurse follow a patient from admission to discharge to eliminate overlaps in service for a 50% reduction in patient prep time and a 19% decrease in staff overtime
- **Retooled reprocessing** with rearrangement of the reprocessing room for better efficiency and a strict dirty-to-clean flow protocol for improved infection control

- **Better supply management** using a system of par levels incorporating prefilled bins for a cost savings of 28% and simplified inventory ordering



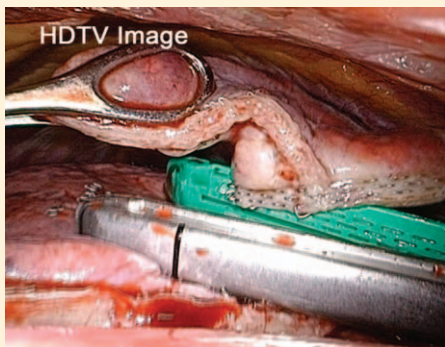
“Olympus was beneficial in getting our physicians to start thinking ‘outside the box’ and realize we were wasting a lot of space, time and money that we could no longer sustain,” concludes Denis. Olympus EndoSite Consulting offers a comprehensive collection of professional services to help healthcare facilities improve efficiency, maximize revenue and optimize service delivery. For more information, visit [www.olympusamerica.com/consulting](http://www.olympusamerica.com/consulting).



# VATS: Minimally invasive lung surgery, now in high definition



**V**ideo-assisted thoracoscopic surgery (VATS) is a minimally invasive surgical technique used to treat diseases in the chest. During VATS, two or more small incisions (ports) are made in the chest. A video thoracoscope is then inserted through one port and surgical instruments are inserted through other ports. The thoracoscope transmits images from inside of the chest onto a video monitor so that the surgeon can perform the procedure in a minimally invasive fashion. VATS allows surgeons to perform many complex procedures using much smaller incisions than needed in the past.



VATS lung biopsy using Olympus HD EndoEYE Video Thoracoscope

VATS can replace a traditional “open” thorotomy, which uses one large incision between the patient’s ribs to gain access to the chest. The ribs are spread apart, allowing the surgeon direct sight into the thoracic cavity to perform the surgery.

Since VATS avoids this large incision, it reduces the subsequent trauma to the body. VATS leaves smaller surgical scars and spares the patient some post-operative pain, lessening the need for pain medication and assisting them with a potentially quicker recovery. Many patients are able to leave the hospital after a VATS procedure in two days or less versus the three to five typically required for traditional thoracotomies.

The advent of technology like the Olympus HD EndoEYE™ Video Thoracoscope has made VATS and other minimally invasive surgical techniques possible. This videoscope represents a significant breakthrough in thoracoscopic imaging by leveraging a distally mounted, high-definition CCD that provides comprehensive visualization of the pleural cavity. The distally mounted HD CCD delivers a razor-sharp, consistently brighter image with excellent color reproduction and a larger depth of field, plus it is focus free. Additionally, its all-in-one design integrates the light cable and camera system into the laparoscope for improved ergonomics and maintenance.

For more information about the Olympus HD EndoEYE, visit [www.olympussurgical.com/HDEndoEYETHoracicVideoscope.aspx](http://www.olympussurgical.com/HDEndoEYETHoracicVideoscope.aspx).

## Incisionless surgery: NOTES® on emerging therapies

The growing capabilities of therapeutic flexible endoscopy have ushered in a new era in the treatment of gastrointestinal conditions. These trends have set the stage for the development of even less invasive methods to treat conditions in both the gut lumen and in the peritoneal cavity. It seems feasible that major intraperitoneal surgery may one day be performed without skin incisions with natural orifices providing the entry point for surgical interventions in the peritoneal cavity.



Natural Orifice Transluminal Endoscopic Surgery® (NOTES) may well represent the next paradigm shift in minimally invasive therapy. To address this emerging technology, a working group consisting of expert laparoscopic surgeons from the Society of American Gastrointestinal and Endoscopic Surgeons (SAGES) and a group of expert interventional endoscopists representing the American Society for Gastrointestinal Endoscopy (ASGE) have joined together as the Natural Orifice Surgery Consortium for Assessment and Research® (NOSCAR®) Working Group on NOTES.

To aid in the exploration of this promising therapy, the Olympus Research Fund—established in 2007—has contributed \$1 million in grants and supported nine studies toward the effort. Though studies from this grant are ongoing, one of the nine studies is expected to be published in two peer-reviewed journals in the near future. For more information on NOTES, visit [www.noscar.org](http://www.noscar.org).

*“NOTES is moving forward more rapidly than initially expected. Thanks to leaders such as Olympus, we are making great strides in NOTES technology.”*

*~ Robert H. Hawes, MD, FASGE,  
ASGE past president and NOSCAR  
Joint Committee Co-chair*

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- EndoWorks® 7.4

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\*Subscriptions are offered at no charge to qualifying Olympus customers and industry partners, subject to availability.

*"Olympus Guide Sheath Kit" continued from page 2*

**The benefits:** Guide Sheath-enhanced EBUS offers the bronchoscopist many advantages, including:

- Increased reliability with the ability to confirm the position of a lesion
- Reduced procedure time by enabling the physician to easily return to the same lesion or site for multiple biopsies
- Reduced damage to the bronchial wall with forceps passed through the sheath

- Reduced X-ray exposure since continued fluoroscopy is not necessary once the Guide Sheath position has been fixed

When used in conjunction with an ultrasound probe, the innovative Guide Sheath helps delineate the inner structure of peripheral pulmonary lesions and improves the diagnostic rate for small lesions. For more information, see the request form on this page. ●

Please send or fax entire page for fulfillment.